

CALIFORNIA ENERGY COMMISSION

Attention: Docket No. 15=BSTD=01

Dockets Office

1516 Ninth Street, MS4

Sacramento, CA 95814-5512

March 30, 2015

California Energy Commission

DOCKETED

15-BSTD-01

TN 75558

MAR 30 2015

Re: 2016 Building Standards Update; 14-BSTD-01 Rulemaking Comments

To Whom It May Concern,

On behalf of Ecology Action, respectfully submit the following comments concerning the 45 Day Language of California's 2016 Building Energy Efficiency Standards (Title 24 Part 6).

Firstly, on March 27, 2015 the Commission postponed the April 8, 2015 Hearing to consider adoption of revisions to Title 24 to a later date to be announced. Accordingly, we believe the Commission must also extend the official comment period, which is currently slated to end today, by a commensurate period.

Ecology Action appreciates the constructive and collaborative effort that has gone into the draft version of the 2016 Code thus far. The previous drafts that we provided comment on received widespread support from the stakeholder community, with officially docketed comments running more than thirty to one in favor of the key provisions of the proposed language. This level of stakeholder support is unprecedented, and underscores the dire situation that the lighting retrofit industry is facing as a result of the 2013 Code.

Our comments here specifically address the latest version of the proposed 2016 45 Day Language dealing with Indoor Lighting System Alterations and Modifications¹ and Outdoor Lighting System Alterations².

¹ 06-Mazi-Subchapt_6_-_141 0_Nonres Lighting Alterations-v13.docx

² Outdoor Lighting Alterations-v5.docx

Indoor Lighting System Alterations and Modifications

We have inserted the version 13 text below. Our proposed additions are shown in underline and highlight, and our proposed deletions in strikethrough and highlight.

I. **Entire Luminaire Alterations.** For each enclosed space, where the following lighting system alterations specified in Subsections i through iii include a sum total of 20 percent or more of the existing luminaires, the alterations shall meet the lighting power allowance in Section 140.6 and the altered luminaires shall meet the applicable requirements in TABLE 141.0-E, when:

- i. Adding luminaires to the enclosed space; or
- ii. Replacing entire luminaires in the enclosed space; or
- iii. In an enclosed space, reinstalling a luminaire removed from the same space or elsewhere.

EXCEPTION 1 to Section 141.0(b)2I. Alteration of portable luminaires, luminaires affixed to moveable partitions, or lighting excluded in accordance to Section 140.6(a)3.

EXCEPTION 2 to Section 141.0(b)2I. For work consisting of only luminaire replacements per ii above, where replacement luminaires have at least 20 percent lower rated power consumption compared to the original luminaires, and are equipped with an automatic shut-off control complying with Sections 130.1(c)1-A through C, 3, and 4, in spaces other than corridors and stairways.

EXCEPTION 3 to Section 141.0(b)2I. In an enclosed space where only one luminaire is altered per Subsections ii and iii above.

EXCEPTION 4 to Section 141.0(b)2I. Section 130.4 for enclosed spaces altering adding 20 or fewer luminaires automatic shut-off controls.

EXCEPTION 5 to Section 141.0(b)2I. Alterations that would directly cause the disturbance of asbestos, unless the alterations are made in conjunction with asbestos abatement.

J. **Luminaire Component Modifications.** Where 40 or more existing luminaires are modified as specified in i through iii below on any single floor of a building, the modifications shall meet the lighting power allowance in Section 140.6, shall comply with Subsections 130.1(a)1, 2, and 3, and shall not prevent or disable the operation of any multi-level, shut-off, or daylighting controls installed to control the luminaires, when:

- i. Replacing the ballasts or drivers and the associated lamps in the luminaire; or
- ii. Permanently changing the light source of the luminaire; or

iii. Changing the optical system of the luminaire.

Lamp replacements alone and ballast replacements alone shall not be considered a modification of the luminaire provided that the replacement lamps or ballasts can be installed and powered without modifying the luminaire.

EXCEPTION 1 to Section 141.0(b)2J. Modification of portable luminaires, luminaires affixed to moveable partitions, or lighting excluded in accordance to Section 140.6(a)3.

EXCEPTION 2 to Section 141.0(b)2J. Replacement of luminaire components where the modified luminaires have at least 20 percent lower power consumption compared to the original luminaires.

EXCEPTION 3 to Section 141.0(b)2J. Modifications that would directly cause the disturbance of asbestos, unless the modifications are made in conjunction with asbestos abatement.

K. **Lighting Wiring Alterations.** For each enclosed space, the following wiring alterations serving permanently installed lighting shall meet the lighting power allowance in Section 140.6 ,and the altered circuits and luminaires served by them shall meet the applicable requirements in Sections 130.1(a), (c), 130.1(d) for each enclosed space where 75 or more luminaires are located within the primary sidelit daylit zone and the skylit daylit zone, and for each enclosed space, minimum one step between 30-70 percent of lighting power, when:

- i. Adding a circuit feeding luminaires; or
- ii. Replacing, modifying, or relocating wiring between a switch or panelboard and luminaires; or
- iii. Replacing lighting control panels, panelboards, or branch circuit wiring.

EXCEPTION to Section 141.0(b)1K. Modifications strictly limited to addition of lighting controls

EXCEPTION to Section 141.0(b)2K. Alterations that would directly cause the disturbance of asbestos, unless the alterations are made in conjunction with asbestos abatement.

TABLE 141.0-E Control Requirements for Lighting System Alterations

Control requirements that shall be met when 20% or more of existing luminaires are altered	Resulting lighting power, compared to the lighting power allowance specified in Section 140.6(c)2	
	Lighting power is ≤ 85% of allowance	Lighting power is > 85% to 100% of allowance
Section 130.1(a)1, 2, and 3 Area Controls	<u>Yes</u>	Yes

Section 130.1(b) Multi-Level Lighting Controls – only for alterations to general lighting of enclosed spaces 100 square feet or larger with a connected lighting load that exceeds 0.5 watts per square foot	For each enclosed space, minimum one step between 30-70 percent of lighting power regardless of luminaire type, or meet Section 130.1(b)	Yes
Section 130.1(c) Shut-Off Controls	Yes	Yes
Section 130.1(d) Automatic Daylight Controls	Not Required	Yes
Section 130.1(e) Demand Responsive Controls – only for alterations > 10,000 ft ² in a single building, and where the alteration changes the area of the space, or occupancy type of the space, or increases the lighting power	Not Required	Yes

Outdoor Lighting System Alterations

We have inserted the version 5 text below. Our proposed additions are shown in underline and highlight, and our proposed deletions in strikethrough and highlight.

L. Alterations to existing outdoor lighting systems shall meet the following requirements:

i. Alterations that increase the connected lighting load in a lighting application listed in TABLE 140.7-A or 140.7-B shall meet the applicable requirements of Sections 130.0, 130.2, 130.4, and 140.7; and

ii. In alterations that replace 5 or more luminaires or 10 percent or more of the luminaires in a lighting application listed in TABLE 140.7-A or 140.7-B, the altered luminaires shall meet the applicable requirements of Sections 130.0, 130.2 and 130.4; and

iii. In alterations that replace 5 or more luminaires or 50 percent or more of the luminaires in a lighting application listed in TABLE 140.7-A or 140.7-B, the lighting in that application shall meet the applicable requirements of Sections 130.0, 130.2, 130.4 and 140.7.

EXCEPTION 21 to Section 141.0(b)2Liii. Alterations where the replacement luminaires have at least 40 percent lower power consumption compared to the original luminaires, may not comply with the lighting power allowances of Tables 140.7-A and B.

EXCEPTION 32 to Section 141.0(b)3Liii. Section 130.4 for projects involving 20 or fewer luminaires installations of controls.

Ecology Action feels it is imperative to not add further restrictions or qualifications to the above indoor and outdoor alterations language. The above language already embodies significant and hard-won stakeholder compromise. The continued viability of the lighting retrofit industry is already in extreme jeopardy as a result of the 2013 Code, and failure to seriously address these now would be disastrous.

Respectfully,

Gene Thomas

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Ecology Action